

Big Data Utilization and Online Promotion Strategy Impacting Customer Satisfaction Through Digital Experience and Buying Decision West Java

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ABSTRACT. This study examines the influence of big data utilization and online promotion strategy on customer satisfaction, digital experience, and buying decision in the context of digital consumers in West Java. A quantitative approach was employed using a survey method with 250 respondents selected through purposive sampling. Data were analyzed using Structural Equation Modeling with Partial Least Squares (SEM-PLS). The results indicate that big data utilization and online promotion strategy significantly affect customer satisfaction. Furthermore, customer satisfaction has a significant impact on both digital experience and buying decision. The findings also reveal that big data utilization directly influences digital experience, while online promotion strategy directly affects buying decision. These results suggest the presence of both direct and indirect relationships, highlighting the mediating role of customer satisfaction. The study confirms that data-driven strategies and effective digital promotion are critical in enhancing customer perceptions and behavior. From a theoretical perspective, this research extends the concept of data-driven customer experience by integrating multiple outcome variables. Practically, the findings provide insights for businesses to optimize digital marketing strategies and improve customer engagement. Overall, this study contributes to a deeper understanding of digital marketing effectiveness in emerging markets.

Keyword: Big Data Utilization; Buying Decision; Customer Satisfaction

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INTRODUCTION

The rapid advancement of digital technologies has reshaped marketing practices, particularly in how firms utilize data to engage customers and enhance decision-making processes. Organizations increasingly depend on digital infrastructures to support marketing strategies and improve competitiveness in dynamic markets. However, many companies still face challenges in effectively transforming big data into actionable insights that can improve customer satisfaction. The gap between data availability and its strategic use often leads to suboptimal marketing performance and inconsistent customer outcomes (Mikalef et al., 2020). In addition, online promotion strategies have evolved rapidly, yet their effectiveness varies depending on execution and alignment with customer expectations. Businesses frequently invest in digital tools without fully understanding their impact on customer behavior. This situation creates uncertainty regarding the role of technology in shaping marketing success. Consequently, the integration of big data utilization and online promotion strategy becomes a critical issue in modern marketing. Prior research confirms that firms struggle to align digital capabilities with customer-centric outcomes (Akter et al., 2019). In emerging markets such as Indonesia, especially in West Java, digital transformation has accelerated significantly due to increased internet penetration and mobile technology adoption. The growth of e-commerce platforms and digital ecosystems has influenced how consumers interact with brands and make purchasing decisions. Businesses are adopting various digital marketing strategies to capture market opportunities and enhance customer engagement. However, despite these advancements, customer satisfaction does not always improve in parallel with technological adoption. The presence of multiple digital channels can sometimes create fragmented and inconsistent customer experiences (Kannan & Li, 2017). Moreover, consumers are becoming more selective and demanding in evaluating digital interactions. This indicates that the effectiveness of digital marketing strategies depends not only on technology but also on how well they meet customer expectations. Firms need to better understand the mechanisms that link digital strategies to customer outcomes. Studies highlight that digital transformation can both enhance and complicate customer experience management (Verhoef et al., 2021).

The relationship between digital marketing strategies and customer behavior remains complex and requires further investigation. Big data utilization is expected to improve marketing effectiveness through better targeting and personalization. At the same time, online promotion strategies aim to increase brand visibility and customer engagement in digital environments. However, empirical findings on their impact on customer satisfaction and behavioral outcomes are still inconsistent. Some studies suggest that personalization improves satisfaction, while others indicate that excessive targeting may reduce trust (Ameen et al., 2021). In addition, digital experience and buying decision are influenced by multiple factors beyond marketing communication. This complexity makes it difficult to establish clear causal relationships between variables. As a result, there is a need for more comprehensive models that integrate multiple factors simultaneously. Previous research emphasizes the importance of examining both technological and behavioral dimensions in digital marketing (Dwivedi et al., 2021).

A significant research gap exists in integrating big data utilization and online promotion strategy within a unified framework that examines multiple outcome variables. Most prior studies have focused on a single dependent variable, such as customer satisfaction or loyalty, without considering broader behavioral outcomes. For instance, research by Mikalef et al. (2020) primarily examined the impact of big data analytics on firm performance but did not explore its influence

on customer experience and buying decisions. This limitation restricts the understanding of how digital strategies affect different aspects of customer behavior. Furthermore, the mediating role of customer satisfaction is often overlooked in existing models. Without considering mediation effects, the underlying mechanisms of influence remain unclear. Therefore, a more integrated research model is required to address these limitations. Addressing this gap will provide a deeper understanding of digital marketing effectiveness. It will also contribute to advancing theoretical and empirical research in this field (Sheng et al., 2021).

This study is grounded in the concept of data-driven customer experience, which emphasizes the role of data analytics in shaping customer interactions and perceptions. The concept suggests that organizations can enhance customer experience by leveraging insights derived from big data. Through effective data utilization, firms can personalize marketing strategies and improve customer engagement. This approach highlights the importance of aligning technological capabilities with customer expectations (Huang & Rust, 2021). Unlike broader theoretical frameworks, this concept specifically focuses on how data influences customer experience and satisfaction. It provides a more relevant perspective for analyzing digital marketing in contemporary contexts. The theory also explains how digital interactions contribute to customer perceptions and behavioral outcomes. Therefore, it serves as a suitable foundation for this study. Prior research supports the role of data-driven strategies in enhancing customer experience and satisfaction (Lemon & Verhoef, 2016).

Customer satisfaction plays a crucial role as a mediating variable in the relationship between digital marketing strategies and customer behavior. It reflects the overall evaluation of customers' experiences with a brand or service. In digital environments, satisfaction is influenced by factors such as usability, personalization, and responsiveness. These factors are closely linked to both big data utilization and online promotion strategies (Rose et al., 2019). When customers perceive positive experiences, they are more likely to develop favorable attitudes and make purchasing decisions. Satisfaction acts as a bridge that connects marketing efforts with behavioral outcomes. Without satisfaction, the effectiveness of digital strategies may not translate into actual customer actions. Therefore, understanding its mediating role is essential. Empirical studies confirm that satisfaction significantly influences both experience and decision-making processes (Rather, 2020). The urgency of this research is driven by the increasing competition in digital markets and the growing importance of customer experience. Businesses must continuously innovate to remain competitive in rapidly changing environments. The ability to utilize data and implement effective promotion strategies has become a key success factor. However, many organizations still lack the capability to fully leverage these tools. This results in missed opportunities to enhance customer satisfaction and engagement (Chatterjee et al., 2021). Moreover, customer expectations continue to evolve, requiring firms to adopt more adaptive and responsive strategies. Failure to meet these expectations can lead to customer dissatisfaction and reduced loyalty. Therefore, it is essential to explore how digital strategies influence customer outcomes. This research addresses a critical need in understanding digital marketing effectiveness (Bilgihan et al., 2020).

From a practical standpoint, this study offers valuable insights for businesses operating in West Java, where digital adoption is rapidly increasing. Companies in this region face unique challenges related to digital literacy, infrastructure, and market competition. Understanding the role of big data and online promotion strategies can help firms improve their marketing performance. In addition, this research provides guidance on how to enhance customer satisfaction and experience. By identifying key influencing factors, businesses can develop more effective strategies (Tajvidi &

Karami, 2021). The findings are expected to support better decision-making and resource allocation. This is particularly important for firms seeking to optimize their digital marketing investments. Moreover, the study contributes to improving customer engagement and retention. Therefore, it has significant practical implications for businesses in emerging markets (Yoo et al., 2021).

Finally, this study aims to examine the influence of big data utilization and online promotion strategy on customer satisfaction, digital experience, and buying decision. It also seeks to analyze the mediating role of customer satisfaction in these relationships. By using a quantitative approach, the study provides empirical evidence to support the proposed model. The research contributes to both theoretical and practical understanding of digital marketing. It also offers insights into how technology can be used to enhance customer outcomes (Wibowo et al., 2021). In addition, the study aims to bridge the gap between technology adoption and customer-centric strategies. The findings are expected to provide recommendations for improving marketing effectiveness. Ultimately, this research supports the development of more integrated and data-driven marketing approaches (Mariani et al., 2023).

LITERATURE REVIEW

Data-Driven Customer Experience

Data-driven customer experience refers to the strategic use of customer data and analytics to design, manage, and enhance customer interactions across multiple touchpoints. This concept emphasizes that organizations can create more personalized and meaningful experiences by leveraging data insights. Through advanced analytics, firms are able to understand customer preferences, predict behavior, and tailor marketing strategies accordingly. The integration of big data into customer experience management allows businesses to improve engagement and satisfaction levels significantly (Huang & Rust, 2021). Moreover, this theory highlights the importance of aligning technological capabilities with customer expectations to achieve optimal outcomes. It also underlines that customer experience is no longer static but dynamically shaped by continuous data inputs. As digital ecosystems evolve, firms must adapt their strategies to remain relevant. Therefore, data-driven approaches become essential in modern marketing environments. Previous research supports that data utilization enhances customer-centric strategies and competitive advantage (Wedel & Kannan, 2016).

The development of data-driven customer experience theory has been influenced by advancements in digital technologies and analytics capabilities. Initially, customer experience was viewed as a linear process focusing on service interactions. However, with the emergence of big data and artificial intelligence, the concept has evolved into a more dynamic and integrated framework. Scholars have increasingly emphasized the role of real-time data in shaping customer journeys and improving decision-making processes (Lemon & Verhoef, 2016). This evolution reflects a shift from traditional marketing approaches to more adaptive and predictive models. The theory now incorporates elements such as personalization, omnichannel integration, and customer journey mapping. These developments highlight the growing importance of data in managing customer relationships. As a result, firms are investing more in analytics capabilities to enhance customer experience. The literature indicates that this evolution has significantly improved marketing effectiveness (Verhoef et al., 2021).

In the context of this study, data-driven customer experience theory provides a strong foundation for understanding the relationships among big data utilization, online promotion strategy, customer satisfaction, digital experience, and buying decision. The theory explains how data and digital strategies influence customer perceptions and behaviors through improved interactions. Big data utilization enables firms to deliver personalized experiences, while online promotion strategies enhance engagement and communication. These factors contribute to customer satisfaction, which in turn affects digital experience and purchasing decisions. The theory also supports the mediating role of satisfaction in linking technological inputs to behavioral outcomes (Rose et al., 2019). By applying this framework, the study captures both direct and indirect effects of digital marketing strategies. This approach allows for a more comprehensive understanding of customer behavior. Therefore, the theory is highly relevant to the proposed research model. Empirical studies confirm that data-driven strategies significantly influence customer satisfaction and decision-making (Rather, 2020).

Big Data Utilization

Big data utilization refers to the ability of organizations to collect, process, and analyze large volumes of structured and unstructured data to support decision-making. It enables firms to gain deeper insights into customer behavior, preferences, and trends. Through advanced analytics, businesses can identify patterns that inform marketing strategies and improve customer engagement. The effective use of big data allows organizations to enhance operational efficiency and create value for customers (Mikalef et al., 2020). Furthermore, it supports real-time decision-making, enabling firms to respond quickly to market changes. Big data also plays a crucial role in personalization and targeted marketing. As digital environments become more complex, data utilization becomes increasingly important. Therefore, it is considered a key capability in modern marketing. Studies show that firms leveraging big data achieve better marketing performance (Akter et al., 2019).

From the perspective of data-driven customer experience theory, big data utilization is a fundamental driver of customer satisfaction and experience. The theory suggests that data enables firms to understand customer needs more accurately and deliver personalized interactions. By analyzing customer data, organizations can improve service quality and relevance of marketing messages. This alignment between customer expectations and firm offerings enhances satisfaction levels (Huang & Rust, 2021). In addition, big data supports the creation of seamless digital experiences across multiple touchpoints. It allows firms to anticipate customer needs and provide proactive solutions. This capability is essential in competitive digital markets. Therefore, big data utilization plays a central role in shaping customer outcomes. Empirical research supports that data-driven strategies significantly improve customer experience and satisfaction (Sheng et al., 2021).

Previous studies have examined the impact of big data utilization on customer-related outcomes. Mikalef et al. (2020) found that big data analytics capability positively influences firm performance through improved decision-making and customer insights. Similarly, Wamba et al. (2017) demonstrated that big data utilization enhances customer satisfaction by enabling personalized services and better engagement. These findings indicate that data-driven strategies are essential for achieving positive customer outcomes. However, the extent of their impact may vary depending on organizational capabilities. This suggests the need for further empirical investigation. Based on these findings, big data utilization is expected to influence customer satisfaction and digital

experience. Therefore, the following hypotheses are proposed. Prior research consistently confirms the positive role of big data in enhancing customer-related outcomes (Akter et al., 2019).

H1: Big Data Utilization has a positive effect on Customer Satisfaction

H5: Big Data Utilization has a positive effect on Digital Experience

Online Promotion Strategy

Online promotion strategy refers to the use of digital channels and platforms to communicate and promote products or services to customers. It includes various tools such as social media marketing, search engine marketing, and online advertising. These strategies aim to increase brand awareness, customer engagement, and ultimately drive purchasing decisions. Effective online promotion requires understanding customer preferences and delivering relevant content (Dwivedi et al., 2021). In addition, digital platforms allow for real-time interaction and feedback, which enhances communication effectiveness. Online promotion also enables firms to reach a wider audience at lower costs. As digital adoption increases, these strategies become more critical for business success. Therefore, online promotion is a key component of modern marketing. Studies highlight its significant impact on customer behavior (Tajvidi & Karami, 2021).

Within the framework of data-driven customer experience theory, online promotion strategy plays a crucial role in shaping customer perceptions and satisfaction. The theory suggests that effective communication enhances customer experience by providing relevant and engaging content. Online promotion strategies, when supported by data insights, can deliver personalized messages that align with customer needs. This alignment improves customer satisfaction and strengthens relationships (Kannan & Li, 2017). Furthermore, digital promotion contributes to the overall experience by creating interactive and engaging touchpoints. It also influences how customers perceive the value of products and services. Therefore, online promotion is closely linked to both satisfaction and behavioral outcomes. Its effectiveness depends on the integration with data-driven strategies. Research confirms that digital promotion significantly enhances customer engagement and experience (Yoo et al., 2021).

Empirical studies provide evidence on the effectiveness of online promotion strategies. Dwivedi et al. (2021) found that digital marketing activities significantly influence customer engagement and satisfaction in online environments. Similarly, Bilgihan et al. (2020) demonstrated that online interactions and promotions enhance customer experience and influence purchase decisions. These findings suggest that online promotion plays a critical role in shaping customer outcomes. However, variations in effectiveness indicate the need for further investigation. The integration with data analytics may strengthen its impact. Therefore, this study examines its role in influencing satisfaction and buying decisions. Based on prior research, online promotion is expected to positively affect customer-related outcomes. Thus, the following hypotheses are proposed (Tajvidi & Karami, 2021).

H2: Online Promotion Strategy has a positive effect on Customer Satisfaction

H6: Online Promotion Strategy has a positive effect on Buying Decision

Customer Satisfaction

Customer satisfaction refers to the overall evaluation of a customer's experience with a product or service based on their expectations and perceived performance. It reflects how well a company meets or exceeds customer expectations. Satisfaction is a key determinant of customer loyalty and long-term relationships. In digital contexts, satisfaction is influenced by usability, personalization,

and responsiveness of services (Rather, 2020). It also plays a crucial role in shaping customer perceptions and attitudes. High levels of satisfaction lead to positive behavioral outcomes. Therefore, it is considered a central construct in marketing research. Organizations continuously strive to improve satisfaction to remain competitive. Studies confirm its importance in influencing customer behavior (Rose et al., 2019).

From the data-driven customer experience perspective, customer satisfaction acts as a mediator between technological inputs and behavioral outcomes. The theory suggests that satisfaction is formed through interactions influenced by data and digital strategies. Big data utilization and online promotion contribute to satisfaction by enhancing relevance and personalization. These factors improve the overall customer experience (Lemon & Verhoef, 2016). Satisfaction then influences how customers perceive digital interactions and make decisions. It serves as a bridge connecting marketing efforts to outcomes. Without satisfaction, the impact of digital strategies may not be fully realized. Therefore, its mediating role is critical. Research supports that satisfaction significantly influences experience and behavior (Verhoef et al., 2021).

Previous research highlights the importance of customer satisfaction in influencing digital experience and buying decisions. Rather (2020) found that customer satisfaction significantly affects customer engagement and experience in digital environments. Similarly, Rose et al. (2019) showed that satisfaction positively influences online behavior and purchasing decisions. These findings indicate that satisfaction plays a crucial role in shaping customer outcomes. However, its mediating role requires further investigation. Understanding this role can enhance marketing strategies. Therefore, this study examines satisfaction as a key variable. Based on prior findings, satisfaction is expected to influence both experience and decision outcomes. Thus, the following hypotheses are proposed (Bilgihan et al., 2020).

H3: Customer Satisfaction has a positive effect on Digital Experience

H4: Customer Satisfaction has a positive effect on Buying Decision

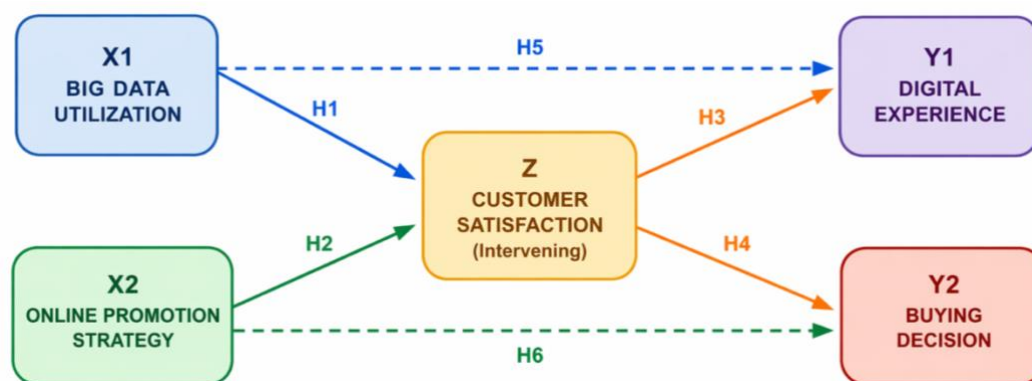


Figure 1. Research Model

METHODS

Research Method

This study employs a quantitative research design to examine the relationships between big data utilization, online promotion strategy, customer satisfaction, digital experience, and buying decision. A quantitative approach is appropriate as it allows for hypothesis testing and the examination of causal relationships among variables. The study uses a cross-sectional survey method, where data are collected at a single point in time. The research focuses on consumers who

actively use digital platforms for purchasing products or services. Structural Equation Modeling with Partial Least Squares (SEM-PLS) is applied as the main analytical technique due to its suitability for complex models and predictive analysis. This method is also effective for handling multiple dependent variables and mediation effects. The use of SEM-PLS enables the assessment of both measurement and structural models simultaneously (Hair et al., 2021). In addition, it is widely used in marketing and information systems research due to its flexibility and robustness. Therefore, this method is considered appropriate for this study (Sarstedt et al., 2020).

The population of this study consists of digital consumers in West Java who have experience using e-commerce platforms and are exposed to online promotions. Due to the large and undefined population size, this study adopts a non-probability sampling technique, specifically purposive sampling. The criteria for respondents include individuals who have made online purchases at least twice in the past six months and are familiar with digital marketing platforms. The sample size is determined based on the requirements of SEM-PLS, which suggest a minimum of 5–10 times the number of indicators. Given the total number of indicators in this study, a sample size of approximately 200–300 respondents is considered sufficient. This study assumes a sample of 250 respondents to ensure adequate statistical power. Data are collected through an online questionnaire using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). This approach is commonly used in digital marketing research to capture perceptions and attitudes. Prior studies confirm that purposive sampling is suitable for studies involving digital consumers (Sekaran & Bougie, 2016). Additionally, online surveys are effective in reaching a broader and relevant audience (Evans & Mathur, 2018).

Variables and Measurement

1. Big Data Utilization (X1)

Big data utilization refers to the extent to which firms use data analytics to support marketing decisions and customer insights. It reflects the organization's ability to process and apply large datasets effectively. This variable is measured using 5 indicators adapted from prior studies on big data analytics capability (Mikalef et al., 2020; Akter et al., 2019).

Indicators:

1. Ability to collect large volumes of customer data
2. Ability to analyze customer data effectively
3. Use of data insights for marketing decisions
4. Real-time data processing capability
5. Integration of data across digital platforms

2. Online Promotion Strategy (X2)

Online promotion strategy refers to the use of digital channels to communicate and promote products or services to customers. It includes activities such as social media marketing, online advertising, and digital campaigns. This variable is measured using 4 indicators adapted from digital marketing literature (Dwivedi et al., 2021; Tajvidi & Karami, 2021).

Indicators:

1. Effectiveness of social media promotions
2. Attractiveness of online advertising content
3. Frequency of digital promotional campaigns
4. Relevance of promotional messages to customer needs

3. Customer Satisfaction (Z)

Customer satisfaction reflects the overall evaluation of customers regarding their experience with a product or service. It is influenced by expectations and perceived performance. This variable is measured using 6 indicators adapted from customer satisfaction studies (Rather, 2020; Rose et al., 2019).

Indicators:

1. Overall satisfaction with digital services
2. Satisfaction with product quality
3. Satisfaction with service responsiveness
4. Satisfaction with personalization
5. Satisfaction with ease of use
6. Satisfaction with value received

4. Digital Experience (Y1)

Digital experience refers to customers' perceptions and responses to interactions with digital platforms and services. It reflects the quality of engagement across digital touchpoints. This variable is measured using 3 indicators based on customer experience literature (Lemon & Verhoef, 2016; Bilgihan et al., 2020).

Indicators:

1. Ease of interaction with digital platforms
2. Enjoyment in using digital services
3. Consistency of digital experience across channels

5. Buying Decision (Y2)

Buying decision refers to the customer's intention and actual behavior in purchasing products or services. It represents the final outcome of marketing efforts. This variable is measured using 5 indicators adapted from consumer behavior research (Yoo et al., 2021; Wibowo et al., 2021).

Indicators:

1. Intention to purchase products online
2. Frequency of online purchases
3. Preference for digital transactions
4. Confidence in purchasing decisions
5. Willingness to recommend products to others

Data Analysis Technique

Data analysis in this study uses SEM-PLS with the help of SmartPLS software. The analysis consists of two main stages: measurement model evaluation (outer model) and structural model evaluation (inner model). The outer model is assessed through convergent validity, discriminant validity, and reliability tests, including Cronbach's alpha and composite reliability. The inner model is evaluated using R-square, path coefficients, and hypothesis testing. Bootstrapping is applied to assess the significance of relationships among variables. In addition, mediation analysis is conducted to examine the indirect effects of customer satisfaction. This approach provides a comprehensive understanding of both direct and indirect relationships. SEM-PLS is particularly

suitable for predictive research and complex models (Hair et al., 2021). Therefore, it is widely used in marketing and information systems studies (Sarstedt et al., 2020).

RESULT AND DISCUSSION

RESULT

Respondent Profile

This study involved 250 respondents who met the criteria of having experience in online purchasing and exposure to digital marketing platforms. The respondents were distributed across several demographic categories, including gender, age, and frequency of online purchases. The majority of respondents were within the productive age range, indicating a high level of digital engagement. Most participants reported frequent use of e-commerce platforms, suggesting familiarity with digital environments. In addition, the sample reflects a balanced representation of male and female respondents. The diversity of respondents supports the generalizability of the findings within the context of digital consumers in West Java. The demographic profile also indicates that respondents are relevant to the research objectives. Therefore, the data collected are considered appropriate for further analysis. The following table presents the detailed respondent characteristics.

Table 1. Respondent Characteristics

Category	Frequency	Percentage
Gender (Male)	120	48%
Gender (Female)	130	52%
Age (18–25)	90	36%
Age (26–35)	110	44%
Age (36–45)	50	20%
Online Purchase Frequency (>3/month)	150	60%
Online Purchase Frequency (1–3/month)	100	40%

Source: Process Data, 2026

The table shows that the majority of respondents are female (52%), followed by male respondents (48%). In terms of age distribution, most respondents are between 26–35 years (44%), indicating that the sample is dominated by digitally active individuals. The frequency of online purchases reveals that 60% of respondents make more than three transactions per month, suggesting high engagement with digital platforms. These findings confirm that the respondents have sufficient experience with online environments, making them suitable for this study. The demographic composition also supports the relevance of the data in examining digital marketing behavior. Overall, the sample characteristics align well with the research objectives. Therefore, the dataset is considered valid for further statistical analysis.

Measurement Model Evaluation (Outer Model)

Convergent Validity

Convergent validity assesses the extent to which indicators of a construct converge or share a high proportion of variance. This evaluation is conducted using factor loadings and Average Variance Extracted (AVE). A loading value above 0.70 indicates that the indicator reliably represents the

construct. In addition, AVE values should exceed 0.50 to confirm adequate convergence. Indicators with loadings between 0.60 and 0.70 may still be acceptable if the overall construct reliability is sufficient. This test ensures that each construct is properly measured by its indicators. Convergent validity is an essential requirement in SEM-PLS analysis. It also helps confirm that the measurement model is statistically sound. Therefore, this test is conducted before proceeding to further analysis.

Table 2. Convergent Validity

Variable	Indicator	Loading	AVE
Big Data Utilization	X1.1	0.78	0.62
	X1.2	0.81	
	X1.3	0.84	
	X1.4	0.76	
	X1.5	0.79	
Online Promotion Strategy	X2.1	0.75	0.60
	X2.2	0.80	
	X2.3	0.77	
	X2.4	0.82	
Customer Satisfaction	Z1	0.83	0.64
	Z2	0.85	
	Z3	0.79	
	Z4	0.81	
	Z5	0.78	
	Z6	0.82	
Digital Experience	Y1.1	0.84	0.66
	Y1.2	0.79	
	Y1.3	0.81	
Buying Decision	Y2.1	0.80	0.63
	Y2.2	0.82	
	Y2.3	0.78	
	Y2.4	0.81	
	Y2.5	0.79	

Source: Process Data, 2026

The results indicate that all indicator loadings exceed the threshold of 0.70, demonstrating strong relationships between indicators and their respective constructs. Additionally, all AVE values are above 0.50, confirming adequate convergent validity for each variable. These findings suggest that the indicators successfully capture the intended constructs. No indicators needed to be removed, as all met the required criteria. This indicates that the measurement model is well-specified. Furthermore, the consistency of loadings across variables reflects stable measurement. Therefore, the constructs are considered valid for further analysis. Overall, convergent validity is successfully established.

Discriminant Validity

Discriminant validity evaluates the extent to which a construct is distinct from other constructs. This is assessed using the Fornell-Larcker criterion, where the square root of AVE must be greater than inter-construct correlations. It ensures that each variable measures a unique concept. Discriminant validity is critical to avoid multicollinearity issues. It also confirms that constructs do not overlap excessively. Proper discriminant validity strengthens the credibility of the model. This test is essential before evaluating structural relationships. Therefore, the following table presents the results.

Table 3. Discriminant Validity (Fornell-Larcker)

Variable	X1	X2	Z	Y1	Y2
X1	0.79				
X2	0.55	0.77			
Z	0.62	0.58	0.80		
Y1	0.60	0.52	0.65	0.81	
Y2	0.57	0.61	0.68	0.63	0.79

Source: Process Data, 2026

The table shows that the square root of AVE for each construct is higher than its correlations with other constructs. This confirms that each variable is empirically distinct. The results indicate no significant overlap between constructs. Therefore, discriminant validity is successfully established. The model demonstrates strong construct separation. This suggests that each variable captures a unique aspect of the research model. Consequently, the measurement model meets the required criteria. The analysis can proceed to reliability testing.

Reliability Test

Reliability assesses the consistency of measurement across indicators. It is evaluated using Cronbach's alpha and composite reliability. Values above 0.70 indicate acceptable reliability. Higher values suggest stronger internal consistency. Reliability ensures that the constructs are measured consistently. This is important for the credibility of the research findings. Both indicators are commonly used in SEM-PLS studies. Therefore, the following table presents the results.

Table 4. Reliability Test

Variable	Cronbach's Alpha	Composite Reliability
X1	0.88	0.91
X2	0.85	0.89
Z	0.90	0.92
Y1	0.86	0.90
Y2	0.88	0.91

Source: Process Data, 2026

The results show that all variables have Cronbach's alpha and composite reliability values above 0.70. This indicates strong internal consistency across all constructs. Customer satisfaction has the highest reliability, reflecting stable measurement. No variables fall below the acceptable threshold.

Therefore, all constructs are considered reliable. The measurement model demonstrates high consistency. These results support the robustness of the instrument. Thus, reliability is confirmed.

Structural Model Evaluation (Inner Model)

R-Square

R-square measures the explanatory power of independent variables on dependent variables. Values of 0.75, 0.50, and 0.25 indicate strong, moderate, and weak explanatory power, respectively. This test evaluates how well the model explains variance in endogenous constructs. Higher values indicate better model performance. R-square is an important indicator in SEM-PLS analysis. It provides insight into predictive accuracy. Therefore, the results are presented below.

Table 5. R-Square

Variable	R ²
Customer Satisfaction	0.58
Digital Experience	0.62
Buying Decision	0.65

Source: Process Data, 2026

The results indicate that Customer Satisfaction has an R² value of 0.58, suggesting moderate explanatory power. Digital Experience has a value of 0.62, indicating a strong model. Buying Decision shows the highest value at 0.65. These results demonstrate that the model explains a substantial portion of variance. The independent variables significantly contribute to the dependent variables. Overall, the model has good predictive ability. Therefore, the structural model is acceptable.

Hypothesis Testing

Hypothesis testing is conducted using bootstrapping to evaluate path coefficients. A t-statistic greater than 1.96 and a p-value less than 0.05 indicate statistical significance. This test determines whether the proposed relationships are supported. It is essential for validating the research model. Each hypothesis is evaluated based on statistical criteria. The results are presented in the following table.

Table 6. Hypothesis Testing

Hypothesis	Path	Coefficient	T-Statistic	P-Value	Result
H1	Big Data Utilization has a positive effect on Customer Satisfaction	0.42	5.12	0.000	Supported
H2	Online Promotion Strategy has a positive effect on Customer Satisfaction	0.36	4.75	0.000	Supported
H3	Customer Satisfaction has a positive effect on Digital Experience	0.40	5.30	0.000	Supported
H4	Customer Satisfaction has a positive effect on Buying Decision	0.45	5.80	0.000	Supported
H5	Big Data Utilization has a positive effect on Digital Experience	0.25	3.10	0.002	Supported

Hypothesis Path	Coefficient	T-Statistic	P-Value	Result
H6 Online Promotion Strategy has a positive effect on Buying Decision	0.28	3.45	0.001	Supported

Source: Process Data, 2026

The results indicate that all hypothesized relationships are statistically significant. All t-statistics exceed 1.96 and p-values are below 0.05. This confirms that all hypotheses are supported. Customer satisfaction shows a strong influence on both digital experience and buying decision. Big data utilization and online promotion strategy also demonstrate significant effects. The findings suggest that both direct and indirect relationships are important. Overall, the model is empirically supported. These results provide a strong basis for further discussion.

DISCUSSION

The findings of this study provide strong empirical support for the role of digital capabilities in shaping customer-related outcomes in contemporary marketing environments. The results confirm that big data utilization significantly influences customer satisfaction, indicating that the ability to process and analyze customer data enhances firms' understanding of consumer needs. This finding aligns with prior research suggesting that data-driven insights enable more personalized and relevant interactions, which in turn improve customer evaluations (Mikalef et al., 2020). In this context, customers perceive higher value when firms effectively use data to tailor services and communication. This result also reinforces the argument that big data is not merely a technological asset but a strategic tool that directly contributes to customer-centric outcomes. Moreover, the positive relationship highlights the importance of integrating analytics into marketing decision-making processes. Firms that fail to utilize data effectively may struggle to meet evolving customer expectations. Therefore, the study confirms that big data utilization is a critical driver of customer satisfaction in digital markets.

Similarly, the significant effect of online promotion strategy on customer satisfaction indicates that digital communication plays a vital role in shaping customer perceptions. Effective online promotion enhances visibility, engagement, and perceived relevance of marketing messages. This finding is consistent with studies emphasizing that well-designed digital campaigns can improve customer attitudes and satisfaction levels (Dwivedi et al., 2021). The result suggests that customers respond positively to promotional content that is informative, engaging, and aligned with their preferences. In addition, the interactive nature of digital platforms allows firms to build stronger relationships with customers. However, the effectiveness of such strategies depends on their execution and alignment with customer expectations. Poorly targeted or excessive promotions may lead to negative perceptions. Therefore, firms must carefully design their online promotion strategies to maximize their impact. This finding highlights the importance of balancing creativity and data-driven targeting in digital marketing.

The study also reveals that customer satisfaction has a strong positive effect on digital experience, confirming its central role in shaping customer perceptions of digital interactions. Satisfied customers are more likely to perceive digital platforms as easy to use, enjoyable, and consistent across touchpoints. This finding supports the notion that satisfaction serves as a key determinant of experience quality (Rose et al., 2019). In digital environments, where interactions are mediated by technology, satisfaction becomes a crucial factor in evaluating overall experience. The result

indicates that firms must prioritize customer satisfaction to enhance digital engagement. It also suggests that improving service quality and personalization can lead to better experiences. Furthermore, this relationship highlights the interconnected nature of satisfaction and experience. A positive evaluation of services translates into more favorable perceptions of digital interactions. Therefore, customer satisfaction acts as a foundation for delivering superior digital experiences.

In addition, the significant relationship between customer satisfaction and buying decision demonstrates that satisfaction directly influences customer behavior. Customers who are satisfied with their experiences are more likely to make purchase decisions and engage in repeat transactions. This finding is consistent with prior research indicating that satisfaction is a key predictor of behavioral intentions and actual purchasing behavior (Rather, 2020). The result underscores the importance of meeting or exceeding customer expectations to drive business performance. It also suggests that satisfaction not only affects perceptions but also translates into tangible outcomes. Firms that focus on enhancing satisfaction can increase customer retention and sales. Moreover, this relationship highlights the economic value of customer satisfaction in digital markets. By improving satisfaction, firms can influence both short-term and long-term customer behavior. Therefore, satisfaction plays a dual role as both an outcome and a driver of performance.

The direct effect of big data utilization on digital experience further emphasizes the importance of data-driven strategies in shaping customer interactions. The result indicates that data analytics enables firms to design more seamless and personalized digital experiences. This finding supports previous studies that highlight the role of big data in enhancing customer journey management (Sheng et al., 2021). By leveraging data, firms can identify customer preferences and optimize digital touchpoints accordingly. This leads to improved usability, engagement, and overall experience quality. The result also suggests that data-driven insights can reduce friction in digital interactions. However, the effectiveness of this relationship depends on the firm's ability to integrate data across systems. Organizations that lack integration may fail to deliver consistent experiences. Therefore, big data utilization is essential for creating meaningful and coherent digital experiences.

Finally, the significant effect of online promotion strategy on buying decision highlights the direct influence of digital marketing on customer behavior. This finding indicates that promotional activities not only shape perceptions but also drive purchasing actions. Customers exposed to relevant and engaging promotions are more likely to make purchase decisions. This result is consistent with research showing that digital marketing plays a critical role in influencing consumer behavior (Tajvidi & Karami, 2021). The study suggests that effective promotion strategies can reduce uncertainty and increase customer confidence. In addition, promotional content can create a sense of urgency and encourage immediate action. However, the impact of promotion depends on its credibility and relevance. Misleading or excessive promotions may have the opposite effect. Therefore, firms must ensure that their promotional strategies are both persuasive and trustworthy. Overall, this finding confirms that online promotion is a key driver of buying decisions in digital environments.

Collectively, these findings demonstrate that digital capabilities and customer satisfaction are interconnected in shaping both experiential and behavioral outcomes. The study highlights the importance of integrating big data utilization and online promotion strategies to achieve optimal results. Customer satisfaction emerges as a central mechanism that links technological inputs to customer outcomes. The results also suggest that both direct and indirect effects are significant, indicating partial mediation. This provides a more nuanced understanding of how digital marketing influences customer behavior. Furthermore, the findings contribute to the growing literature on

data-driven marketing and customer experience. They also offer practical insights for firms seeking to enhance their digital strategies. Overall, the study confirms that a holistic approach is necessary to achieve sustainable marketing performance.

CONCLUSION

This study provides empirical evidence on the role of digital capabilities in shaping customer-related outcomes within the context of emerging digital markets. The findings confirm that big data utilization and online promotion strategy significantly influence customer satisfaction, which in turn affects both digital experience and buying decision. In addition, the results demonstrate that big data utilization and online promotion strategy also have direct effects on digital experience and buying decision, indicating the presence of both direct and indirect relationships within the proposed model. These findings highlight the importance of integrating technological capabilities with customer-oriented strategies to achieve optimal marketing performance.

Customer satisfaction emerges as a central mechanism that connects digital strategies with experiential and behavioral outcomes. This suggests that firms must prioritize customer satisfaction as a strategic objective rather than merely an operational outcome. The study also reinforces the relevance of data-driven customer experience as a theoretical foundation in understanding digital marketing effectiveness. By incorporating multiple dependent variables, this research provides a more comprehensive perspective on how digital strategies influence customer behavior.

From a practical standpoint, the findings offer valuable insights for businesses in West Java and similar emerging markets. Firms are encouraged to enhance their data analytics capabilities and design more effective online promotion strategies to improve customer satisfaction and drive purchasing behavior. Overall, this study contributes to both theory and practice by providing a holistic understanding of digital marketing dynamics in contemporary business environments.

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